

Amendments to the Claims:

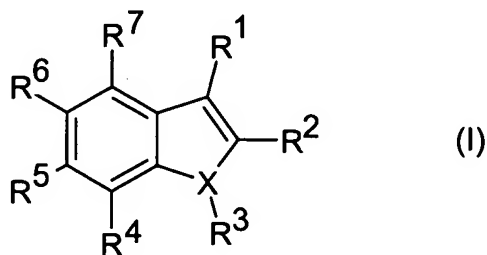
This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A crystal of phosphorylated human Aurora-A kinase fragment comprising amino acid residues 122-403 complexed with amino acid residues 1-43 of human TPX2, wherein said crystal diffracts to at least 3 angstrom resolution and has a crystal stability within 5% of its unit cell dimensions.
2. (Previously Presented) The crystal according to claim 1, having the coordinates as listed in Table B.
3. (Currently amended) The crystal according to claim ~~1 or 2~~, said crystal belonging to the orthorhombic space group $P2_12_12_1$ and having the unit cell dimensions in angstroms: $a = 59.63 \pm 5\%$, $b = 81.72 \pm 5\%$, $c = 83.05 \pm 5\%$.
4. (Currently amended) The crystal according to ~~any one of claims 1 to 3~~, having a Aurora-A ligand binding site defined by the structure coordinates of Aurora-A amino acids Q127, W128, R126, L159, F157, E170, L169, V206, Y199, H187, R179, L178, V182, Y199, L188, I184, V252, K250, P282, H280 according to Table B.
5. (Previously Presented) A molecule or molecular complex comprising at least a part of the ligand binding site defined by structure coordinates of Aurora-A amino acids Q127, W128, R126, L159, F157, E170, L169, V206, Y199, H187, R179, L178, V182, Y199, L188, I184, V252, K250, P282, H280 according to Table B, or a mutant or homologue thereof.

6. (Previously Presented) A machine-readable data storage medium comprising a data storage material encoded with machine readable data, wherein the data is defined by the structure coordinates of phosphorylated human Aurora-A kinase complexed with amino acid residues 1-43 of human TPX2 according to Table B or a homologue of said complex, wherein said homologue comprises backbone atoms that have a root mean square deviation from the backbone atoms of the complex of not more than 3.0 Å.
7. (Previously Presented) A binding site in Aurora-A, or a homologue or mutant thereof, for an AR modulator in which a portion of said ligand is in van der Waals contact or hydrogen bonding contact with any portion or all of residues Q127, W128, R126, L159, F157, E170, L169, V206, Y199, H187, R179, L178, V182, Y199, L188, I184, V252, K250, P282, H280 of Aurora-A according to Table B.
8. (Previously Presented) The binding site according to claim 7, wherein the homologue or mutant has 25%-95% identity to residues Q127, W128, R126, L159, F157, E170, L169, V206, Y199, H187, R179, L178, V182, Y199, L188, I184, V252, K250, P282, H280 of Aurora-A according to Table B.
9. (Previously Presented) A method for identifying a compound that modulates Aurora-A kinase activity, the method comprising any combination of steps of :
 - a) modeling test compounds that fit spatially into the Aurora-A binding site as defined by structure coordinates according to Table B;
 - b) using said structure coordinates or binding site as set forth in claim 7 to identify structural and chemical features;
 - c) employing identified structural or chemical features to design or select compounds as potential Aurora-A modulators;
 - d) employing the three-dimensional structural model or the ligand binding site to

- design or select compounds as potential Aurora-A modulators;
- e) synthesizing the potential Aurora-A modulators;
- f) screening the potential Aurora-A modulators in an assay characterized by binding of a test compound to the Aurora-A; and
- g) modifying or replacing one or more amino acids from Aurora-A selected from the group consisting of Q127, W128, R126, L159, F157, E170, L169, V206, Y199, H187, R179, L178, V182, Y199, L188, I184, V252, K250, P282, H280 of Aurora-A according to Table B.
10. (Previously Presented) An Aurora-A modulator identified by the method of claim 9.
11. (Previously Presented) An allosteric inhibitor of Aurora-A, at least a portion of which binds with any portion or all of residues Q127, W128, R126, L159, F157, E170, L169, V206, Y199, H187, R179, L178, V182, Y199, L188, I184, V252, K250, P282, H280 of Aurora-A according to Table B.
12. (Previously Presented) The allosteric inhibitor of claim 11, wherein binding is van der Waals contact or hydrogen bonding contact.
13. (Previously Presented) Indole and indene derivatives of formula (I)



wherein

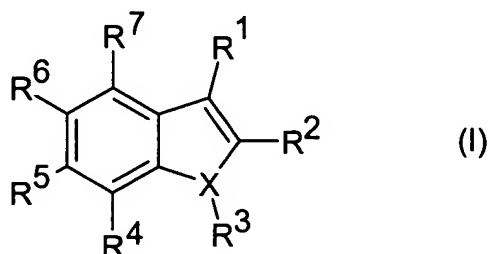
- R¹ represents hydrogen, alkylene-COR¹¹, alkylene-NHR⁸, alkylene-OR⁸, or alkylene-SR⁸;
- R² represents hydrogen, alkylene-COR¹¹, alkylene-NHR⁸, alkylene-OR⁸, or alkylene-SR⁸;
- R³ represents hydrogen, alkyl, alkylene-R⁹, alkenylene-R⁹, alkynylene-R⁹, or arylene-R⁹;
- R⁴ represents hydrogen;
- R⁵ represents hydrogen, alkyl, OR¹⁰, NHR¹⁰, SR¹⁰, alkylene-R¹⁰, alkenylene-R¹⁰, alkynylene-R¹⁰, or arylene-R¹⁰;
- R⁶ represents hydrogen, alkyl, OR¹⁰, NHR¹⁰, SR¹⁰, alkylene-R¹⁰, alkenylene-R¹⁰, alkynylene-R¹⁰, or arylene-R¹⁰;
- R⁷ represents hydrogen;
- R⁸ represents hydrogen, CO-alkyl, (aa)_masp(aa)_n, (aa)_mglu(aa)_n, or (aa)_mcys(aa)_n, or optionally substituted alkyl, aryl or heteroaryl;
- R⁹ represents NH-alkyl, N(alkyl)₂, N⁺(alkyl)₃, optionally substituted aryl, or optionally substituted heteroaryl;
- R¹⁰ represents hydrogen or a mono- or bicyclic, saturated, partially unsaturated or aromatic, alicyclic or heterocyclic radical which may be substituted;
- R¹¹ represents hydrogen, alkyl or haloalkyl.
- X represents a nitrogen atom or CH;
- aa represents an amino acid radical; and
- n is zero or an integer of 1 to 10;

m is zero or an integer of 1 to 10,

provided that R¹ and R² are not both hydrogen and that R⁵ and R⁶ are not both hydrogen,

and optical isomers, physiologically acceptable salts, derivatives and prodrugs thereof.

14. (Previously Presented) Indole and indene derivatives of formula (I)



wherein

R¹ represents hydrogen, alkylene-NHR⁸, alkylene-OR⁸, or alkylene-SR⁸;

R² represents hydrogen, alkylene-NHR⁸, alkylene-OR⁸, or alkylene-SR⁸;

R³ represents hydrogen, alkyl, alkylene-R⁹, alkenylene-R⁹, alkynylene-R⁹, or arylene-R⁹;

R⁴ represents hydrogen;

R⁵ represents hydrogen, alkyl, OR¹⁰, NHR¹⁰, SR¹⁰, alkylene-R¹⁰, alkenylene-R¹⁰, alkynylene-R¹⁰, or arylene-R¹⁰;

R⁶ represents hydrogen, alkyl, OR¹⁰, NHR¹⁰, SR¹⁰, alkylene-R¹⁰, alkenylene-R¹⁰, alkynylene-R¹⁰, or arylene-R¹⁰;

R⁷ represents hydrogen;

R⁸ represents hydrogen, CO-alkyl, (aa)_masp(aa)_n, (aa)_mglu(aa)_n, or

$(aa)_m\text{cys}(aa)_n$;

R⁹ represents NH-alkyl, N(alkyl)₂, N⁺(alkyl)₃, aryl, or heteroaryl;

R¹⁰ represents hydrogen, aryl, or substituted aryl;

X represents a nitrogen atom or CH;

aa represents an amino acid radical; and

n is zero or an integer of 1 to 10;

m is zero or an integer of 1 to 10,

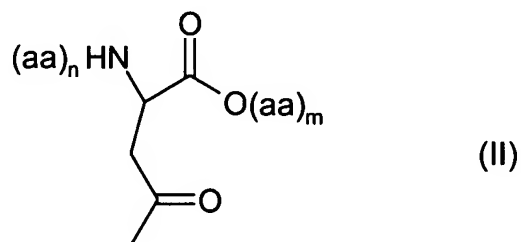
provided that R¹ and R² are not both hydrogen and that R⁵ and R⁶ are not both hydrogen,

and optical isomers, physiologically acceptable salts and prodrugs thereof:

15. (Previously Presented) The compound according to claim 13 or 14, wherein one of residues R¹ and R², preferably R², is hydrogen and the other, preferably R¹, represents alkylene-NHR⁸.
16. (Previously Presented) The compound according to claim 13 or 14, wherein one of residues R¹ and R², preferably R², is hydrogen and the other, preferably R¹, represents alkylene-OR⁸.
17. (Previously Presented) The compound according to claim 16, wherein R⁸ is hydrogen.
18. (Previously Presented) The compound according to claim 13 or 14, wherein one of residues R¹ and R², preferably R², is hydrogen and the other, preferably R¹, represents alkylene-COR¹¹.
19. (Previously Presented) The compound according to claim 18, wherein R¹¹ is

hydrogen, methyl or trifluormethyl.

20. (Previously Presented) The compound according to claim 13 or 14, wherein R⁸ is a radical of the formula (II)



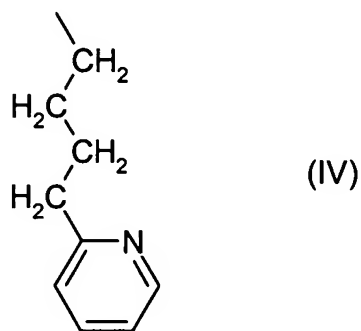
wherein

aa represents an amino acid radical;

n is zero or an integer of 1 to 10; and

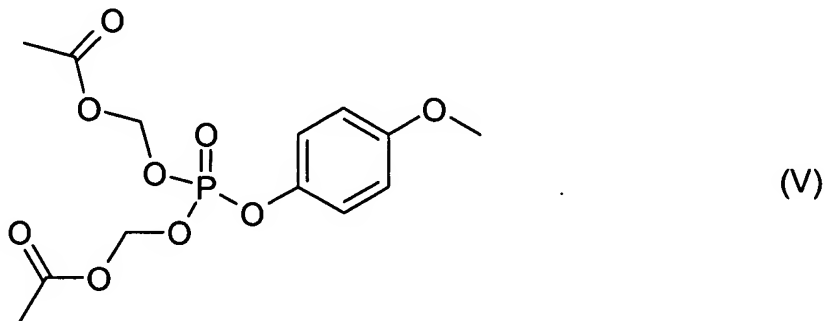
m is zero or an integer of 1 to 10.

21. (Currently amended) The compound according to ~~any one of claims 13 to 20~~ or 14, wherein R³ is a radical of the formula (IV)

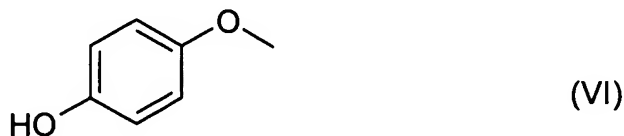


22. (Currently amended) The compound according to ~~any one of claims 13 to 21~~ or 14, wherein R⁵ and/or R⁶ represent OR¹⁰, wherein R¹⁰ is defined as in claim 13 or 14.

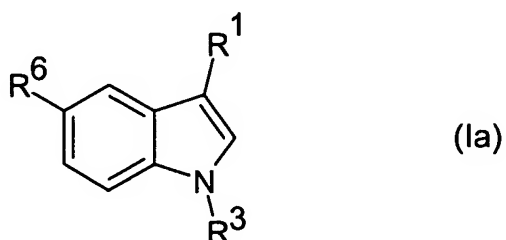
23. (Currently amended) The compound according to ~~any one of~~ claims 13 to ~~220~~ 14, wherein R^{10} is aryl which may be substituted with 1, 2 or 3 substituents independently selected from the group consisting of hydroxy $-OPO_3H_2$, $-CH_2PO_3H_2$, $-CF_2PO_3H_2$, $-COOH$, $-CH(COOH)_2$, $-OPO_3(R^{11})_2$, $-CH_2OPO_3(R^{11})_2$, $-CF_2PO_3(R^{11})_2$, $-COOR^{11}$, and $-CH(COOR^{11})_2$, wherein R^{11} is a radical that is cleavable *in vivo*.
24. (Previously presented) The compound according to claim 23, wherein R^{11} represents alkyl, CH_2OCO -alkyl, and C_2H_4-S-CO -alkyl.
25. (Currently amended) The compound according to any one of claims 23 ~~or~~ 24, wherein R^5 and/or R^6 are/is the radical of formula (V)



26. (Previously Presented) The compound according to claim 23, wherein R^5 and/or R^6 are/is the radical of formula (VI)



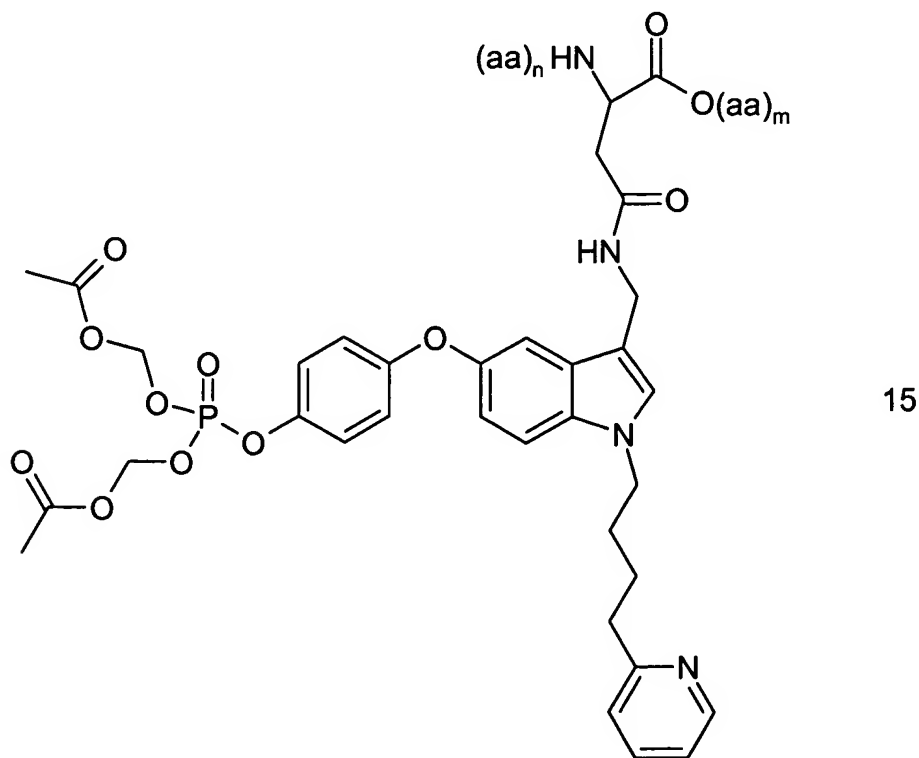
27. (Currently amended) The compound according to claim 13 or 14, having the formula (Ia)



wherein

R^1 , R^3 and R^6 are defined as in ~~any one of claims 13 to 20~~ or 14.

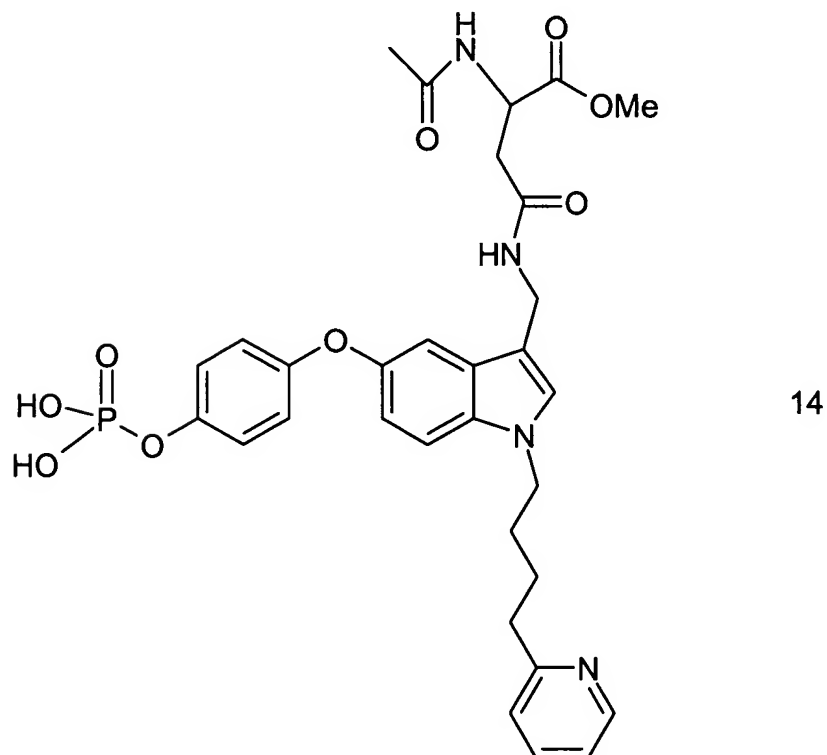
28. (Previously Presented) The indole derivative of formula (15)



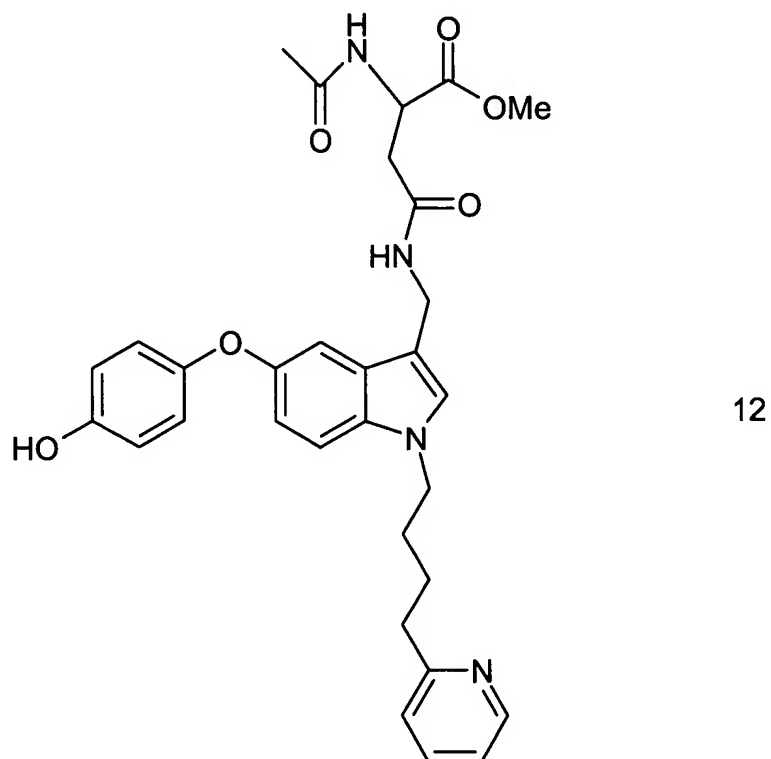
wherein

aa, n and m are defined as in claim 13 or 14,
and optical isomers and physiologically acceptable salts thereof.

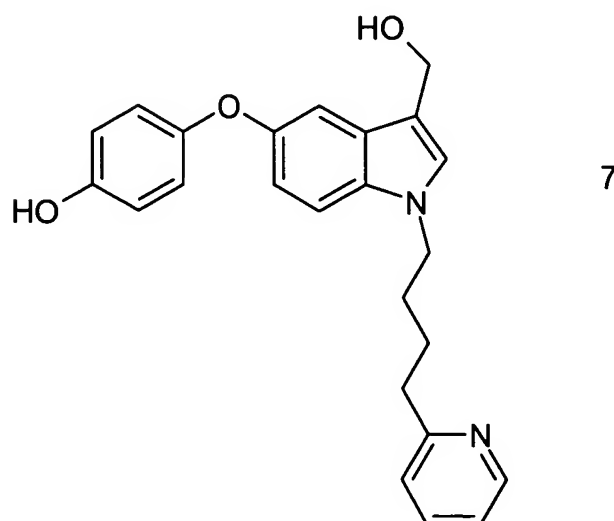
29. (Previously Presented) The indole derivative of formula (14)



30. (Previously Presented) The indole derivative of formula (12)



31. (Previously Presented) The indole derivative of formula (7)



32. (Currently amended) The Aurora-A modulator of claim 10, the allosteric inhibitor of claims 11 or 12, or the indole or indene derivative of ~~any one of claims 13 to 31~~ or 14 for use in therapy.
33. (Currently amended) Pharmaceutical composition, comprising at least one Aurora-A modulator of claim 10, at least one allosteric inhibitor of claims 11 or 12, or at least one indole or indene derivative of ~~any one of claims 13 to 31~~ or 14, optionally in combination with a pharmaceutically acceptable excipient.
34. (Currently amended) A method for treating cancer which comprises administering ~~The use of~~ an Aurora-A modulator of claim 10, of an allosteric inhibitor of claims 11 or 12, or of an indole or indene derivative of ~~any one of claims 13 to 31~~ or 14 to a subject in need thereof ~~in the manufacture of a medicament for treating cancer.~~
35. (Currently amended) The method ~~use~~ according to claim 34, wherein the cancer is a breast or colon carcinoma.